

26. (Amended) A method for the treatment or prevention of cancer in a subject comprising:

administering to the subject an amount of a molecule comprising SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, or SEQ ID NO:10, which molecule (i) binds CD40, (ii) increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%, and (iii) comprises a human immunoglobulin constant domain, which amount is effective for the treatment or prevention of cancer.

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27. (Amended) A method for the treatment or prevention of cancer in a subject comprising:

administering to the subject an amount of a purified protein, which protein (i) competes for binding to CD40 with monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-110, (ii) increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%, and (iii) comprises a human immunoglobulin constant domain, which amount is effective for the treatment or prevention of cancer.

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37. (Amended) A method for the treatment or prevention of cancer or an immune disorder in a subject comprising administering to the subject, in an amount effective for said treatment or prevention: (a) a molecule that immunospecifically binds CD40, which molecule increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%; and (b) CD40 ligand.

[Please add the following new claims:]

58. (New) A method for the treatment or prevention of cancer in a subject comprising:

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administering to the subject an amount of a molecule comprising SEQ ID NO:8, SEQ ID NO:9, and SEQ ID NO:10, which molecule (a) binds CD40, and (b) is a fusion protein comprising the amino acid sequence of a second molecule that is not an antibody, which amount is effective for the treatment or prevention of cancer.

59. (New) A method for the treatment or prevention of cancer in a subject comprising:

administering to the subject an amount of a molecule comprising SEQ ID NO:8, SEQ ID NO:9, and SEQ ID NO:10, which molecule (a) binds CD40, and (b) comprises a human immunoglobulin constant domain, which amount is effective for the treatment or prevention of cancer.

60. (New) A method for the treatment or prevention of cancer in a subject comprising:

administering to the subject an amount of a protein comprising an amino acid sequence that has at least 95% identity to SEQ ID NO:7 as determined by use of the BLASTp computer program, which protein (a) binds CD40; and (b) comprises a human immunoglobulin constant domain, which amount is effective for the treatment or prevention of cancer.

61. (New) A method for the treatment or prevention of cancer in a subject comprising:

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administering to the subject an amount of a protein comprising an amino acid sequence that comprises regions having at least 80% identity to SEQ ID NO:8, SEQ ID NO:9 and SEQ ID NO:10, respectively, as determined by use of the BLASTp computer program, which protein (a) binds CD40; and (b) comprises a human immunoglobulin constant domain, which amount is effective for the treatment or prevention of cancer.

62. (New) The method of claim 61, wherein the protein comprises at least 2 CDR sequences selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9 and SEQ ID NO 10.

63. (New) A method for the treatment or prevention of cancer in a subject comprising:

administering to the subject an amount of a molecule that (a) binds to CD40; (b) increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%;

and (c) comprises a human immunoglobulin constant domain, which amount is effective for the treatment or prevention of cancer.

64. (New) A method for the treatment or prevention of cancer in a subject comprising:

administering to the subject an amount of a molecule which (a) competes for binding to CD40 with monoclonal antibody S2C6 as secreted by the hybridoma deposited with the ATCC and assigned accession number PTA-1110; (b) comprises at least 2 CDR sequences selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9 and SEQ ID NO 10; and (c) comprises a human immunoglobulin constant domain, which amount is effective for the treatment or prevention of cancer.

65. (New) The method of claim 64, wherein the molecule comprises SEQ ID NO:8 and SEQ ID NO:10.

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66. (New) The method of claim 58 or 59, wherein the molecule comprises an amino acid sequence of bryodin (BD1) fused to SEQ ID NO:7 fused to SEQ ID NO:2.

67. (New) The method of any of claims 58, 59, 60, and 63-66, wherein the molecule is purified.

68. (New) The method of claim 61 or 62, wherein the molecule is purified.

69. (New) The method of any of claims 58, 59, 60, and 63-66, wherein the molecule is an antibody.

70. (New) The method of claim 69, wherein the antibody is a chimeric antibody.

71. (New) The method of claim 69, wherein the antibody is a humanized antibody.

72. (New) The method of claim 69, wherein the antibody is a human antibody.

73. (New) The method of any of claims 58, 59, 60, and 63-66, wherein the molecule is conjugated to a chemotherapeutic agent.


74. (New) The method of claim 69, wherein the antibody is conjugated to a chemotherapeutic agent.

75. (New) The method of claim 61 or 62, wherein the molecule is an antibody.

76. (New) The method of claim 75, wherein the antibody is a chimeric antibody.

77. (New) The method of claim 75, wherein the antibody is a humanized antibody.

78. (New) The method of claim 75, wherein the antibody is a human antibody.

 79. (New) The method of claim 61 or 62, wherein the molecule is conjugated to a chemotherapeutic agent.

80. (New) The method of claim 75, wherein the antibody is conjugated to a chemotherapeutic agent.

81. (New) The method of any of claims 58, 59, 60, and 63-66, further comprising administering CD40 ligand to the subject.

82. (New) The method of claim 61 or 62, further comprising administering CD40 ligand to the subject.

83. (New) The method of claim 58 or 59, wherein the molecule comprises SEQ ID NO:7.

84. (New) The method of claim 58 or 59, wherein the molecule further comprises SEQ ID NO:2.

85. (New) The method of claim 83, wherein the molecule further comprises SEQ ID NO:2.

86. (New) The method of claim 60 or 61, wherein the protein increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%.

87. (New) The method of claim 27, 60 or 61, wherein the protein increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 50%.

88. (New) The method of claim 27, 60 or 61, wherein the protein increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 60%.

89. (New) The method of claim 27, 60 or 61, wherein the protein increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 65%.

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90. (New) The method of claim 58, 59 or 64, wherein the molecule increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 45%.

91. (New) The method of claim 26, 37, 58, 59, 63 or 64, wherein the molecule increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 50%.

92. (New) The method of claim 26, 37, 58, 59, 63 or 64, wherein the molecule increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 60%.

93. (New) The method of claim 26, 37, 58, 59, 63 or 64, wherein the molecule increases the binding of CD40 ligand to cell surface CD40 on B cells by at least 65%.

94. (New) The method of claim 26, 37, 58, 59, 63 or 64, wherein the method is for treatment of cancer, the subject has cancer, and the cancer is a hematologic malignancy.

95. (New) The method of claim 87, wherein the method is for treatment of cancer, the subject has cancer, and the cancer is a hematologic malignancy.

96. (New) The method of claim 91, wherein the method is for treatment of cancer, the subject has cancer, and the cancer is a hematologic malignancy.

97. (New) The method of claim 26, 37, 58, 59, 63 or 64, wherein the method is for treatment of cancer, the subject has cancer, and the cancer is a carcinoma.

98. (New) The method of claim 87, wherein the method is for treatment of cancer, the subject has cancer, and the cancer is a carcinoma.

99. (New) The method of claim 91, wherein the method is for treatment of cancer, the subject has cancer, and the cancer is a carcinoma.

100. (New) The method of claim 94, wherein the hematologic malignancy is chronic leukemia, lymphoma, or multiple myeloma.

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101. (New) The method of claim 95, wherein the hematologic malignancy is chronic leukemia, lymphoma, or multiple myeloma.

102. (New) The method of claim 96, wherein the hematologic malignancy is chronic leukemia, lymphoma, or multiple myeloma.

103. (New) The method of claim 100, wherein the chronic leukemia is chronic myelocytic leukemia or chronic lymphocytic leukemia.

104. (New) The method of claim 101, wherein the chronic leukemia is chronic myelocytic leukemia or chronic lymphocytic leukemia.

105. (New) The method of claim 102, wherein the chronic leukemia is chronic myelocytic leukemia or chronic lymphocytic leukemia.

106. (New) The method of claim 100, wherein the lymphoma is Hodgkin's lymphoma or non-Hodgkin's lymphoma.

107. (New) The method of claim 101, wherein the lymphoma is Hodgkin's lymphoma or non-Hodgkin's lymphoma.

108. (New) The method of claim 102, wherein the lymphoma is Hodgkin's lymphoma or non-Hodgkin's lymphoma.

109. (New) The method of claim 97, wherein the carcinoma is ovarian cancer, lung carcinoma or bladder carcinoma.

110. (New) The method of claim 98, wherein the carcinoma is ovarian cancer, lung carcinoma or bladder carcinoma.

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111. (New) The method of claim 99, wherein the carcinoma is ovarian cancer, lung carcinoma or bladder carcinoma.

112. (New) The method of claim 109, wherein the lung carcinoma is small cell lung carcinoma or non-small cell lung carcinoma.

113. (New) The method of claim 110, wherein the lung carcinoma is small cell lung carcinoma or non-small cell lung carcinoma.

114. (New) The method of claim 111, wherein the lung carcinoma is small cell lung carcinoma or non-small cell lung carcinoma.